CHAPTER 6

RECEIPT, CUSTODY, AND STOWAGE

For every procurement action, except for cancellations, there is a receipt action. When a requisition is prepared, only the first of several supply functions has been taken. The material must be received, identified, checked, and distributed to the storerooms or ordering departments.

You might think of a Storekeeper's work as being a circle formed by a chain with each link representing a specific job. Each link is dependent on the others just as there is a relationship between all Storekeeper jobs. If the procurement documents were properly prepared, the receiving procedure will be relatively simple. If receipts are accomplished properly, the rest of the steps are easier.

This chapter discusses the general shipboard procedures that must be followed in receiving stores, stowing the material and processing the receipt documents. The actual steps to accomplish this vary greatly from ship to ship depending upon the size and volume of stores. Whether one Storekeeper does many jobs or there are individuals assigned to specific jobs, the end result must meet the requirements set forth in NAVSUP P-485.

MATERIAL RECEIPT

As in every operation, responsibility for actions to be taken are assigned to key personnel. In receipt of government-owned material for your ship, responsibility takes on added importance because of the many types of material receipts and the required accountability. The SK3 and SK2 should be aware of the receipt responsibilities of the following personnel in order to assist in the receipt of material and to prepare themselves for added responsibilities as they advance in their career.

SUPPLY OFFICER— Is responsible for the receipt, identification, inspection, and distribution of all incoming stores. This does not include medical supplies (except on special accounting classes 207 and 224 ships), Marine Corps stores, bulk petroleum products, and ammunition. The supply officer is also responsible for the processing of receipt documentation. The supply officer will delegate the responsibility for the physical receipt of incoming stores to the leading storeroom Storekeeper.

LEADING STOREROOM STOREKEEPER— Makes sure that incoming material is receipted, identified, inspected, sorted, and distributed, Material may be distributed to supply department storerooms or to other departments when the material is marked for direct turnover (DTO). The leading storeroom Storekeeper also makes sure that receipt documents are accurately annotated and distributed for processing. If the leading storeroom Storekeeper is not there during normal working hours, the next senior storeroom Storekeeper will assume these duties. In performing these duties, the Storekeeper delegated the responsibility of receiving incoming stores will exercise direction over other Storekeepers and the working parties handling these stores.

DUTY STOREKEEPER— Makes sure that material delivered after normal working hours, is receipted, identified, inspected, and placed in the designated receiving section, or turned over to the appropriate department if the receipt document is marked for DTO. The duty Storekeeper makes sure that receipt documents are properly annotated and given to the leading storeroom Storekeeper the next workday.

TYPES OF RECEIPTS

There are several types of receipts with various forms used to document the delivery of material.

Receipts from Purchase

Receipts from purchase normally include materials or services received from vendors as a result of activity purchase action. Receipt documents may include direct purchase receipts milting from the use of DD Form 1155 or the imprest fund. Receipts from purchase also include material received from contractors as a result of an inventory manager initiated contract. there are invoiced on Material Inspection and Receiving Report (DD Form 250) or Order for Supplies and Services/Request for Quotations (DD Form 1155).

Receipts from Ashore Activities

Materials received from ashore supply officers are normally documented on a DOD Single Line Item Release/Receipt Document (DD Form 1348-1).

Receipts from Afloat Supply Activities

Materials received from CLF ships have by an ADP list of the items requested, and a DD Form 1348m for each item. Material received from other afloat units may have either a DD Form 1348-1, the white copy of a DD Form 1348, or a NAVSUP 1250-1 that was submitted as a requisition document.

Receipts from Other Appropriations

Material received from other appropriations (ship's store or Marine Corps, etc.) are normally documented on a Requisition and Invoice/Shipping Document (DD Form 1149).

Miscellaneous Receipts

Miscellaneous receipts include automatic shipments or consignments of material that are not related to a ship's procurement document. An example would be the delivery of an electronic test set or radiac equipment incident to a Naval Electronic Systems Command (NAVELEX) shipment order. Material provided under the Shortage and Valuable Excess (SAVE) program and excess of controlled equipage distributed by type commanders, are also included.

METHODS OF RECEIVING

Stores will be received by direct delivery, freight, or mail. Direct delivery consists of material delivered to the ship by a supply support activity, a commercial vendor, or material picked up by the ship's representative. Freight is material shipped via the Department of Defense transportation or commercial freight system usually is accompanied by a government or commercial bill of lading. Mail consists of all material forwarded by the U.S. Postal Service.

RECEIPT DOCUMENTATION

Material received aboard ship maybe accompanied with a variety of receipt documents depending on how the material was requested the issuing activity, and the modes of transportation used in delivery. Before actual receipt, other documents are received showing notice of material procurement, inspection, movement, and billing. Particular circumstances will dictate what documents will be received with a given commodity. There are, however, certain certifications and/or annotations common to all receipt documents. The end-use receiver must:

1. date the document upon receipt
2. circle the quantity accepted, and
3. sign the document to indicate receipt.

Receipts from supply activities are invoiced on DOD Single Line Item Release/Receipt Document (DD Form 1348-1). Figure 6-1 shows a DD Form 1348-1. You can see how the codes placed on the requisitions have been used on the DD Form 1348-1.

If you were checking in this material, you would know that it was for stock since the storeroom location, A3456, is shown in the supplementary address block and repealed in block C. You would then check the NSN on the material and the quantity received to make sure it agrees with the DD Form 1348-1. The circled quantity indicates that the shown quantity was received.

Material ordered from another ship is normally received with a copy of the DD Form 1348 or NAVSUP Form 1250-1. Purchased material maybe received with copies of a purchase order or dealer's invoice. The receiving procedure is the same regardless of the form used.

All materials received should be accompanied by receipt documents. However, material is occasionally received without them. When this happens, a "dummy invoice" must be prepared. The dummy invoice should show all available information; i.e., supplier, procurement document number, description of the material, NSN, unit of issue, and quantity received. This information may be obtained from markings on the container and material. With this information, the supply office can probably match the material with its procurement document. Also, a Report of Discrepancy (ROD), Standard Form 364, must be submitted for material received without documentation.

A Material Inspection and Receiving Report (DD Form 250) is a multipurpose document that provides evidence of inspection or acceptance at either the material source or its destination. It is used to substantiate contract payments. When material is furnished direct to an afloat activity by a commercial contractor and inspection or acceptance at destination is indicated on the DD Form 250, the material will be inspected by appropriate technical personal. The form

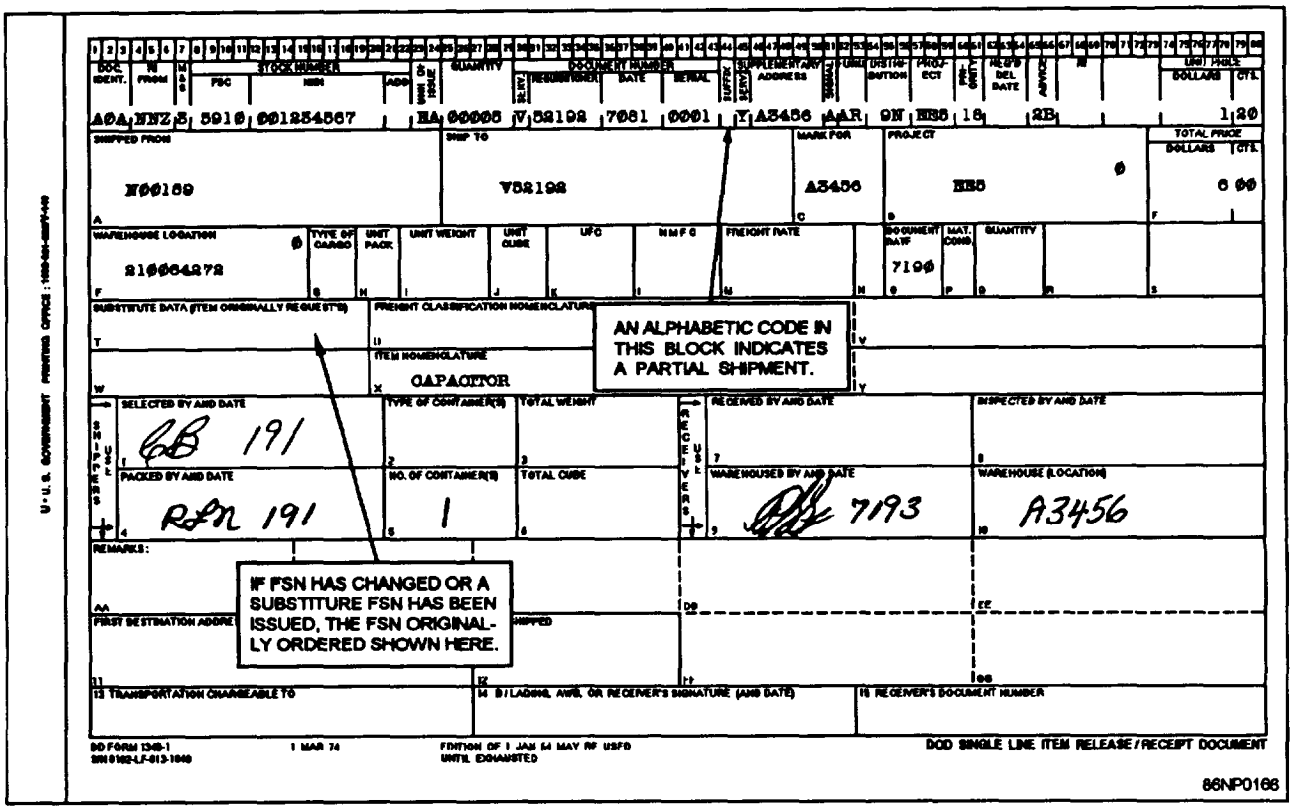

Figure 6-1.—Example of a DOD Single Line Item Release/Receipt Document, DD Form 1348-1.

is completed by the technical representative and the receiving Storekeeper. Entries to be completed on the DD-Form 250 are shown in figure 6-2.

SERVMART RECEIPTS

Upon completion of shopping action, all material must be returned to the ship. The supply officer or the designated representative, using the SERVMART Shopping List (SSL) will count the material. Receipt quantities will be verified by placing a check made next to the quantity and the original SSL will be marked "receipt inspected and verified," dated, and signed.

FILES USED IN RECEIPT PROCESSING

Files are maintained for documents that apply to incoming material receipts. On receipt of the material, they are used m the receiving process. Files also are required for holding such documents subsequent to processing in order to provide a retained record of proofs of receipt and/or disposition of material.

Material Outstanding File

The material outstanding file has a copy of procurement documents originated by the ship for material and services not yet received. It also includes related documentation such as followups, supply status and shipping status, as well as shipping documents that are specifically applicable to a single item.

Material Completed File

The material completed file has a copy of all ship originated procurement documents which have been removed from the material outstanding file. However, such documents will not be filed in the material completed file until receipt procedures for all items are complete and payment processing for purchased material has been accomplished.

Multiple Item Shipping Documents

OUTSTANDING FILE.— Shipping memoranda, transportation control movement documents (TCMDs), and other types of shipping papers may show multiple item shipments that have not been received. They

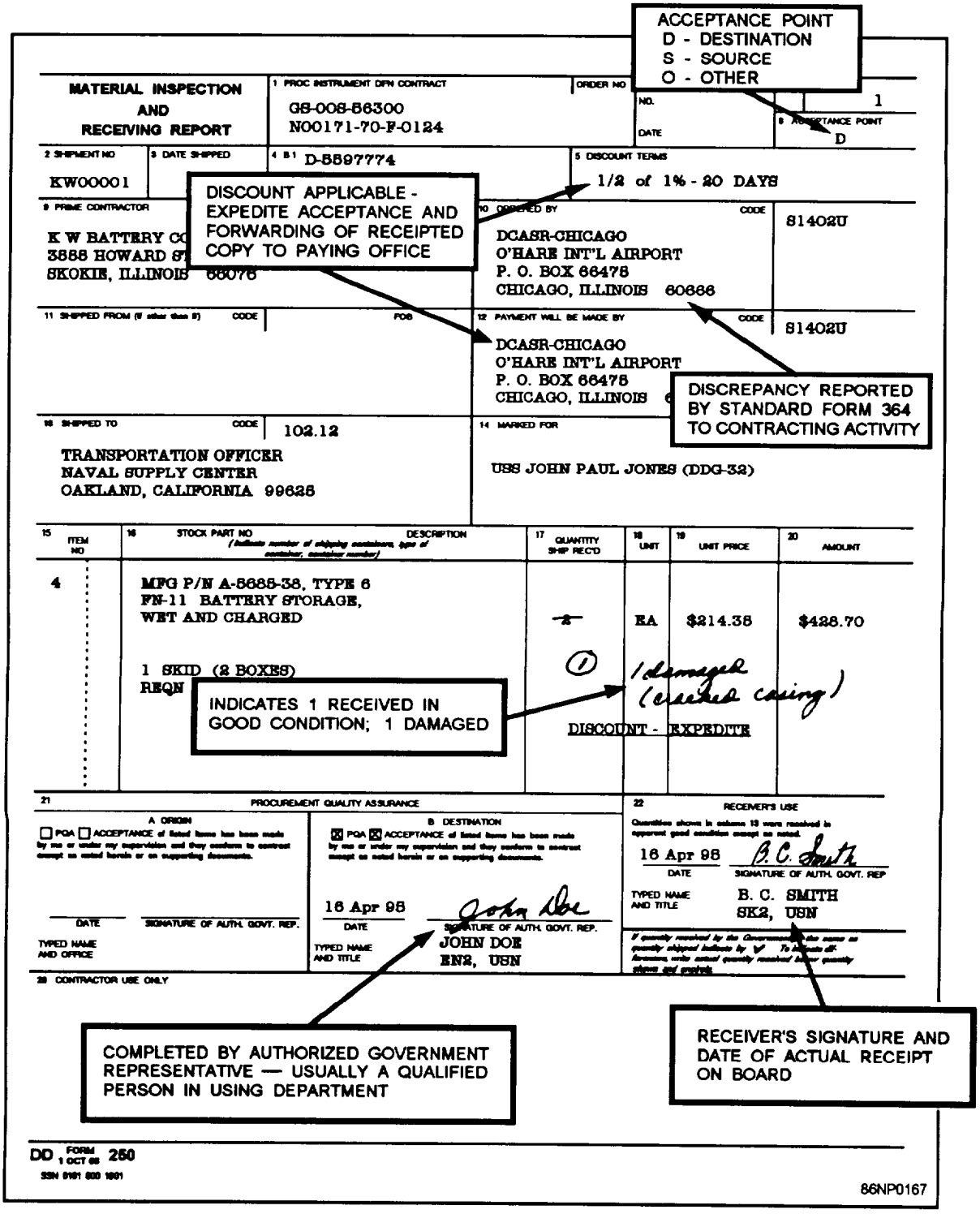

Figure 6-2.—Example of a Material Inspection and Receiving Report, DD Form 250.

should be maintained in the supply office or main receiving area. Outstanding documents will be filed according to shipment destinations.The supply officer should review this file prior to entering port.

COMPLETED FILE.— When the multiple item shipment is received, the outstanding documents will be annotated to indicate date of receipt and any discrepancies noted. Then they are filed in a separate folder marked "completed shipping documents."

Miscellaneous Receipt File

The miscellaneous receipt file contains shipping documents that apply to material consignments not

initiated by a ship's proctuement document. When received, the related document(s) from the miscellaneous receipt file will be annotated with the receipt date. Then it is by the responsible material custodian. The document is then filed in a "completed" segment of the miscellaneous receipt file, or in a separate "completed" file if preferred. In addition, a consumption document will be prepared and processed under ACCESS for each item that is issued as DTO material.

RECEIVING PROCEDURES

Small quantities of stores received on a daily basis through the mail generally do not require special preparations for receipt. Stores which are delivered to the ship in large quantities are stacked on the deck or pier. They are held there until the preliminary identification and package counts are completed. They are then sorted by department or storeroom depending on where they will be distributed. When practical, a central location below decks is designated for the final and detailed processing of incoming stem. This location should be as near to the storerooms as possible, accessible to hatches, but away from the ordinary course of ship's traffic.

Receipts from Naval Activities

Stores received from naval activities require a quantity inspection only. Quality inspection is made by an ashore supply activity when it accepted the material from the supplier. It is not necessary to duplicate the inspection aboard ship. The receiving individual, however, will make inspections to detect any deterioration or breakage that may have occurred since the quality inspection. When stores are received from naval activities in bales, packages or cases they need not be opened to ascertain their contents. The receiving Storekeeper will receipt for them according to their external markings and package count. If any package shows evidence of tampering, it will be opened and the contents verified by count. The procedures outlined in the NAVSUP P-485 will be followed when there is a difference between quantity received and quantity indicated on the shipping document. Acceptance of the entire quantity shipped will be indicated by circling this quantity on the shipping document. The document always will be signed and dated by the receiving individual.

Mail

Normally material shipped by mail does not pass through the initial receiving process. It is delivered from the ship's post office directly the stores receiving area. Except in the case of registered or certified mail, the preliminary inspection/count usually does not take place.

Receipts from the Marine Corps and Other Government Activities

Receipts of stores from other government activities will be inspected for both quantity and quality when delivered to the ship. Stores will be inspected by the receiving individual to verify that they are of acceptable quality. If the receiving individual is not qualified to perform a quality inspection (i.e., a Storekeeper inspecting technical repair parts for stock), the department head who will use this material will provide someone qualified to perform the inspection. After the quantity and quality inspections, acceptance will be indicated by the receiving individual as discussed in the paragraph titled "Receipts from Naval Activities."

Receipts from Commercial Sources

When material has been inspected and accepted by an ashore activity, inspection for quality is not required afloat. However, a quantity inspection must be performed prior to acceptance. Material received that has not been inspected and accepted ashore, the receiving Storekeeper, will conduct an inspection for quality and quantity. Technical personnel will be used when needed. A full and thorough quality inspection will be conducted. All packages will be opened and the contents verified by count. When possible, DTO material will be inspected and accepted by the cognizant department head or an appointed representative. Deliveries from commercial sources should be accompanied with itemized copies of invoices or delivery papers. Individuals will not receipt for material unless a copy of the receipt document can be retained. Material will not be accepted unless the receiving individual is satisfied that it conforms to the specifications included in the purchase document or contract. When directed by the commanding officer, material with minor defects may be accepted. (Refer to the NAVSUP P-485 for special procedures required for receipting and processing delivery tickets for purchases under a blanket purchase agreement.)

Underway Replenishment Materials

The package count is verified just like receipts from supply activities. Signed receipts are not required.

Pickup Material

Material picked up by the ship's representative, will be inspected for quantity at the time of pickup. If the material is purchased, the ship's representative should be qualified to make the technical quality inspection before accepting the material.

DISPOSITION OF MATERIAL

After the preliminary checks described above are completed, the stores are sorted for distribution. At this point DTO material may be turned over to the department representatives. Get signatures on a copy of the receipt paper. You are now ready to move the rest of the material to the storerooms. If the supplementary address block of the requisition shows storeroom locations, case lots or other unit pack materials may be taken to the storeroom. This happens after the receiving Storekeeper pulls one copy of the receipt document and verifies the material and quantity. Receipt of the invoiced quantity is shown by circling the quantity on the receipt document. If the correct quantity is not received, draw a line through the invoiced quantity and enter the quantity received.

Repacked boxes along with any unidentified items are moved to a location below decks. Here the incoming stores, including parcel post, are unpacked. They are checked against receipt documents to verify the materials and quantity, and sorted by storeroom or DTO. DTO material should be turned over to the ordering department as soon as Possible. Make sure you get the signature of the department representative on a copy of the receipt paper.

RECEIPT AND PACKAGING DISCREPANCIES

'The receiving activity reports shipping-type (item) or packaging discrepancies that are the shipper's responsibility using a Report of Discrepancy (ROD), Standard Form 364. The purpose of the ROD is to determine the cause of such discrepancies, effect corrective action and prevent recurrence. When both item and packaging discrepancies are noted on the same shipment, both blocks on the top of the STD Form 364 will be checked. The types of discrepancies required to be reported are described in the NAVSUP P-485. For detailed instructions in the preparation and distribution of the ROD, refer to NAVMATINST 4355.73 series.

Underway Replenishment (UNREP) Receipt Discrepancies

Discrepancies in quantities, unit prices, price extension and document number between a requisition and receipt document are to be resolved directly with the UNREP ship. Losses of $100 or less will be absorbed by the receiver. Such discrepancies should be communicated by message as soon as possible after the UNREP. If notified before the transmitting the expenditure documents to the DFAS. The issuing ship normally can replace them with accurate documents. This can preclude the need for credit documents at a later date. (Refer to the NAVSUP P-485 for detailed information.)

Loss of Material in Transit Due to Enemy Action

When shipping documents or invoices show that material was shipped but not received is due to loss by enemy action, the receipt documents are to be stamped or otherwise have noted upon them:

> "Lost in transit by enemy action. Reference (authority for statement of loss). Expended without survey."

DETERMINING WHEN A SHIPMENT IS CONSIDERED COMPLETE

Shipments are considered complete when the responsibility for the material passes from the supplier to the receiver. For receipts from purchase, the delivery is complete when the material is delivered to the place designated in the purchase document and a signed receipt obtained. Deliveries of material from other ships or supply activities are complete when material is turned over to the ship's representative and signed receipts obtained. During underway replenishment, delivery is complete when the material clears the side of the issuing ship.

CUSTODY

The term "custody" is used to mean the responsibility for proper care, stowage, use, and records of Navy material.

SUPPLY OFFICER RESPONSIBILITY

The supply officer is responsible for all supplies carried in stock except ammunition, fuel, Marine Corps supplies and medical material. When the supplies are stowed in supply storerooms, the supply officer is said to have actual custody (physical possession) of the material, and has full responsibility for the material; i.e., procurement, receipt, stowage, expenditure, and stock records.

The responsibility of custody may be divided. Sometimes it is impossible or impractical to stow material in supply storerooms because of limited storeroom space or inadequate storeroom space for large items, big quantities, or for highly technical or sensitive material. Under these circumstance the material may be stowed in spaces under the control of other departments. The material is in the custody of the other departments since they have physical possession, but it is still in the technical custody of the supply officer. The head of the department having actual custody is responsible for proper stowage, inventory, and use of the material. The supply officer, in exercising technical custody, maintains stock morals, requisitions replenishment stock and provides written instructions to the custodian. Figure 6-3 illustrates this concept.

RESPONSIBILITY OF CUSTODIAN

The storeroom Storekeeper is the custodian of all material stored in the storeroom and is responsible to the supply officer.

SECURITY OF MATERIAL

Material in store will be kept under lock and key in all cases unless the material is of such quantity or dimensions as to make storeroom storage impractical. Storeroom spaces will be locked securely when not in use. Personnel in charge of such spaces are responsible to make sure that security is maintained for all stores in their custody. Persons other than the individual responsible for stowage spaces normally will not be allowed access to stores. An authorized person will always be present when the spaces are open for use. Other persons will be admitted only when necessary for

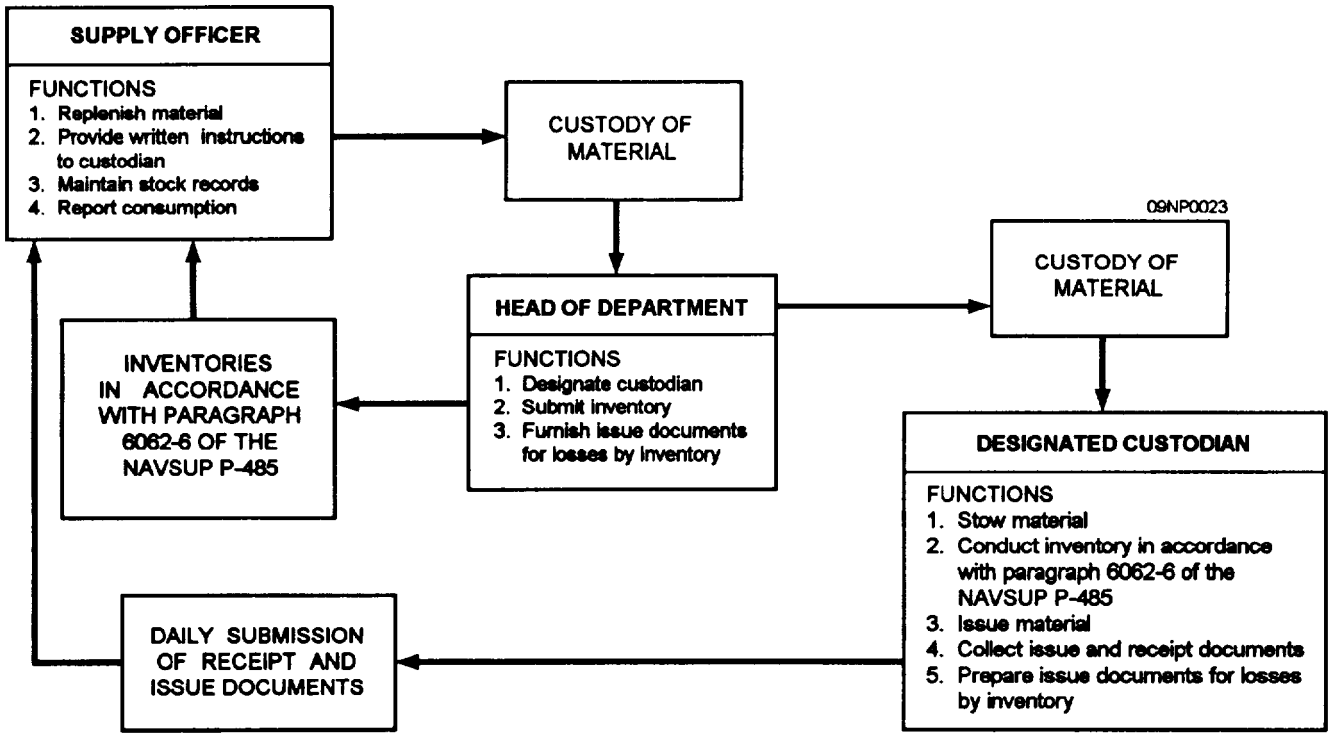

Figure 6-3.-Stock material in custody/subcustody of other department beads.

the stowage and breakout of material or in emergencies (e.g., fire, battle damage, etc.) or as follows:

INSPECTION— Personnel will be allowed access to stowage spaces for purposes of inspection as directed by the commanding officer. Such personnel will not be given the keys to the spaces but will be escorted by responsible personnel as directed by the supply officer.

ACCESS FOR DAMAGE CONTROL PURPOSES— Access to stowage spaces will be authorized to damage control personnel when performing their duties. Stowage spaces will not be secured in such a manner that access using ordinary damage control equipment is impeded in an emergency.

PERMISSION FOR ENTRY— Permission for entry of persons not ordinarily authorized access to stowage spaces will be granted by the supply officer or, in the supply officer's absence, the commanding officer, executive officer, or command duty officer.

Private Use of Stores

Public supplies may not be used by any individual except for emergency issues to persons in distress as authorized by NAVSUP P-485. Issues of material must be made only on authorized issue or transfer documents.

Protection of Stores

The storeroom Storekeeper is responsible for proper stowage of materials to protect them from damage and deterioration while in storage.

STOWAGE

Materials in shipboard storerooms and other stowage areas should be arranged to:

- Make maximum use of space.
- Provide orderly stowage and ready accessibility.
- Prevent damage to the ship or injury to personnel.
- Reduce the possibility of material loss or damage.
- Facilitate the issue of the oldest stock first (i.e., by first-in-first-out (FIFO) method).
- Facilitate inventories

These requirements and other instructions in this section provide basic guidelines which, if observed with a "common sense" approach, will help storeroom Storekeepers to achieve optimum stowage efficiency.

MATERIAL IDENTIFICATION

Material custodians will make sure that all items in stowage are legibly marked, tagged, or labeled with an NSN, NICN, or other identification number. When needed, technical assistance from other departments should be used to determine the identification numbers of unmarked materials. Items that cannot be identified will be turned in ashore for disposition.

MATERIAL PROTECTION LEVELS

Material procured for the Navy is provided preservation-packaging and packing that the inventory manager feels will protect it from deterioration and damage during shipment, handling, and stowage. The protection levels specified to be code marked on unit packages and exterior shipping containment are described in the NAVSUP P-485.

Shipboard Responsibilities

Since most materials received by afloat units were adequately packaged and packed before shipment, the ship's responsibilities generally will be limited to:

- Keeping repair parts in their original packaging until issued
- Repackaging and repacking items that *were* inadequately or improperly protected when received, or that have had their packaging damaged or removed while in stowage
- Reporting material received in an unsatisfactory condition due to inadequate or improper preservation, packaging, or marking
- providing adequate protection of ready for issue (RFI) materials and unserviceable mandatory turn-in repairable to be transferred to another activity (Refer to NAVSUP P-484, Supply Afloat Packaging Procedres.)

LOCATOR SYSTEM

The location of each item in stock will be recorded in its stock record and the Afloat Locator/Inventory Record, NAVSUP Form 1075, (if maintained). Each location will have a five-character alphanumeric (e.g., B0168), designation except when the configuration of the stowage area(s) or physical characteristics of the material dictate an alternate system.

RELOCATION OF MATERIAL IN STOWAGE

Transfer of material between storerooms or to different locations in the same storeroom will be supervised by the leading storeroom Storekeeper, who will make sure that

- material is protected from loss or damage during the move
- material is correctly stowed in the new location
- new locations are promptly and accurately recorded in the materials stock records (and inventory/locator records if maintained).

TYPES AND QUANTITIES OF MATERIAL

In allocating available space, consideration must be given to the categories of material that must be stowed separately (e.g., ship's stem stock food, clothing, bulk consumables, repair parts), and the volume of stowage space needed for the required quantities in each category.

MATERIAL CHARACTERISTICS

In allocating stowage space, consideration must be given to the physical characteristics of the material to be stowed (i.e., weight and size, fragility, perishability, flammability, susceptibility to theft, damage from heat or moisture, and other properties that may affect the safety of the ship or the crew).

STOREROOM CHARACTERISTICS

The number, locations, shapes, and sizes of supply department storerooms vary significantly in each type of ship. Therefore, each supply officer must carefully study the configuration and capacity of available stowage spaces when determining the type and quantity of material to be stowed in each. The location of storeroom doors, hatches, stanchions, ventilation ducts, overhead fixtures, and other structures must be considered in planning the stowage layout. Architectural "obstructions" are altered, when possible and as necessary, to create additional space.

SPACE LAYOUT FACTORS

To the maximum extent that available space permits, you must adhere to the following guidelines when stowing general stems:

- Locate heavy bulk materials in areas convenient to hatches and materials-handling equipment. This minimizes the physical effort required for loading, stowage, and breakouts.
- Locate light bulky material in storerooms with high overhead clearances for maximum use of available space.
- Segregate unlike materials (e.g., hazardous vs nonhazardous, classified vs unclassified, large vs small).
- Locate frequently requested material, such as selected item maintance (SIM) items, as close as possible to the point of issue as possible, in a storeroom that is convenient to maintenance personnel.
- Locate shelf-life items in a readily accessible area to facilitate periodic screening.
- Install appropriate stowage aids in spaces where they can be effectively used.
- Provide for aisles at least 30 inches wide between bins, racks, and/or cabinets.
- Arrange materials with identification labels facing outward to facilitate issues and inventory.
- Avoid multiple locations for the same item.

STOWAGE AIDS

Storerooms are outfitted with bins, racks, shelving, and other stowage aids best suited for the types and quantities of materials to be stowed. When installed stowage aids need to be modified or relocated, or when additionally required stowage aids must be manufactured by a repair ship or shipyard, the supply officer must submit an appropriate work, request to the ship's engineer officer in accordance with the *Ship's Maintenance and Material Management (3-M) Manual* (OPNAVINST 4790.4).

TYPES OF STOREROOMS

You will usually have the types of storerooms main issue, bulk, and repair parts.

Main Issue Storeroom

The main issue storeroom is the place the supply officer designates as the centralized distribution point for most SIM and shelf-life items. Generally it is the most readily accessible of all stock material stowage spaces when watertight integrity restrictions are in

effect. It also may serve as the ship's Supply Support Center (SSC), if established. It may contain the stock records and those publication files, and other records which the supply officer considers necessary for effective operations. If it does not function as an SSC, it may contain locator/inventory records.

Bulk Storerooms

Bulk storerooms (for general stores) are spaces used for the stowage of case lots of frequently demanded items maintained (in smaller quantities) in an issue storeroom, or for items that are too bulky and cumbersome for stowage in an issue storeroom. Storekeepers assigned to bulk storerooms are responsible to the leading storeroom Storekeeper, who normally is assigned to the main issue storeroom.

Repair Parts Storerooms

Supply department storerooms are used for the stowage of repair parts except bulkhead mounted spares and certain other materials authorized to be stowed in other departmental spaces. Although SIM, shelf-life, and certain other repair parts generally are stowed in the main issue storeroom, most repair parts in supply department custody normally are located in spaces designated as repair parts storerooms. They are usually outfitted with bins, drawer cabinets, and other stowage aids. When required, or when available near the operating spaces to be supported, separate storerooms will be used for stowage of electronic repair parts, hull/mechanical/electrical (HM&E) and ordnance repair parts, nuclear weapons repair pads, reactor plant repair parts, etc.

HAZARDOUS MATERIAL STOREROOMS AND LOCKERS

Certain materials with inherent hazardous properties require special stowage facilities and handling precautions. The Naval *Ships' Technical Manual* and the *Hazardous Material Information System* outline the requirements for shipboard stowage of dangerous and semisafe materials. Shipboard stowage facilities commonly used for hazardous general stores items are discussed in the following subparagraphs.

Flammable Liquids Storeroom

The flammable liquids storeroom normally will be located at either end of the ship, below the full load waterline, not adjacent to a magazine and be equipped with an automatic fire alarm and CO^2 system. This storeroom also should have incandescent and explosion proof overhead lights (protected by lamp guards). The switch should be outside the compartment, and nonsparking vent fans, with the controllers outside the compartment.

ACID LOCKER.— An acid locker is a leakproof, led-lined box, chest, or locker especially designed for stowing bottles or carboys of acid. A label bearing the inscription "ACID BOTTLE STOWAGE in 3/8-inch letters must be securely attached to the lid of each acid locker. Acid lockers will be kept in the flammable liquids storeroom. However, acid lockers which contain only medical acids may be kept in a medical storeroom.

ALCOHOL LOCKER.— An alcohol locker is a chest or locker used for security stowage of grain alcohols which are highly susceptible to pilferage (i.e., ethanol or ethyl alcohol). Alcohol lockers will be located in the flammable liquids storemom. However, lockers that contain only medicinal alcohol (100 proof or less) may be located in any secure space designated by the commanding officer.

MATERIALS REQUIRING SPECIAL HANDLING OR STOWAGE

We will first consider the classifications of material and then discuss the special handling or storage requirements for special types of material that are carried for ship's use. Requirements for cargo stowage are not covered because the types of cargo and ship's characteristics vary and must be considered on an individual basis.

Acid

Liquid acid, unless classified as safe material in the *Naval Ships' Technical Manual,* will be stowed in au acid locker. If an acid locker is not available, acid bottles will be stowed in the flammable liquids storeroom. But in this case, the deck and the lower part of the bulkhead must be covered with a watertight robber lining and a label inscribed "ACID BOTTLE STOWAGE" in 3/8-inch letters must be securely attached to the outside of the storeroom door. Corrosive acids are acute fire hazards and should be stowed separately from oxidizing or flammable materials. Corrosive acids (or vapors) must not be allowed to come in contact with the skin or eyes. Storekeeper who stow or issue these acids will wear rubber gloves rubber

aprons, and goggles to protect themselves and their clothing from acid burns.

Alcohol

Since most commonly used alcohols have a flash point below 200 degrees F, they will be stowed in the flammable liquids storeroom. Not all alcohol is readily identifiable by name. For example, many lacquer thinners have methanol (wood alcohol), which is extremely poisonous, as the principal ingredient.

Oxidizing Material

Many shipboard fires with resultant fatalities have been attributed to improper stowage or handling of oxidizing materials particularly calcium hypochlorite. Nitric acid, a strong oxidizer, will be stowed in the acid locker. Oxygen and chlorine gases must be stowed in accordance with the paragraph on compressed gases. All other oxidizers will be stowed in a dry compartment, away from combustible materials.

Calcium hypochlorite itself is noncombustible. However, it is a strong oxidizing agent which will generate heat, liberate chlorine, and cause fire when it comes in contact with paints, oils, greses, detergents, acids, alkalies, antifreeze, fabrics, and other organic and combustible materials. Calcium hypochlorite will be stowed in binhs or lockers labeled "HAZARDOUS MATERIAL CALCIUM HYPOCHLORITE" in red letters on a white background The bins or lockers will not be located in an area which

- is used for stowage of combustible organic materials,
- exceeds 100 degrees F under normal operating conditions,
- is adjacent 10 a magazine,
- is subject to condensation or water accumulation.

Each bin or locker must beat least 5 feet away from any heat source or surface which may exceed 140 degrees F. It will contain no more than 48 6-ounce bottles (for potable water purification) or 36 3-3/4 pound bottles (for sewage waste treatment). The total quantity stowed should not exceed the ship's average endurance level, on CLF ships, calcium hypochbrite may bestowed in general cargo spaces without quantity restriction, provided that the foregoing safety precautions are observed)

Compressed Gases

Compressed gases must be stowed on the weather deck. Unless the ship has below deck stowage spaces specifically designed fix such material. Compressed gas cylinders will be stowed vertically and securely (with valve protection caps in place). They will be stowed away from other flammable materials (especially grease and oil). When compressed gases are stowed on the weather deck, the cylinders will be located as far as possible from navigation, fire control, or gun stations. They will protected from the direct rays of the sun, or accumulation of snow and ice. When compressed gases are stowed below deck, any leaking fumes must be prevented from entering ventilation air-intakes leading to working or living spaces. Since there usually is some gas remaining in most cylinders considered to be empty, "empty" cylinders will be stowed and handled with the same precautions as full cylinders. Compressed gases, particularly the flammable and explosive gases, must be handled with extreme care. Some general rules for handling compressed gas cylinders are:

- Take every precaution to prevent cylinders from being dropped or forcefullly struck against hard surfaces (including other cylinders). Do not tamper with the safety devices in cylinder discharge valves. When cylinders are not in use, be sure that the valve protection caps always are securely attached (If the valve of a compressed gas cylinder should be snapped off, the released energy would cause the cylinder to behave as a missile. For example, a cylinder that is pressurized to 2,200 pounds psi (per square inch) can travel 2,600 feet in free flight, and in a confined space, it could be disastrous.)
- Prevent cylinders from contact with fire, sparks, or electrical circuits. (An exploding steel cylinder would have the same destructive effect as an exploding bomb.)
- Do not drag or slide cylinders when moving. Secure and move them in handtrucks that meet the criteria prescribed in the *Naval Ships' Technical Manual.* If suitable handtrucks are not available, tilt the cylinders and roll them on the bottom edge.
- Secure cylinders in a cradle, pallet, or rack when they are loaded or offloaded with a crane or derrick. Never hoist cylinders with electromagnets, or with hooks or line attached to the valve protection cap.

- Do not alter or deface the numbers or other markings on the cylinders. Do not add markings without approval of the engineer officer. Do not issue cylinders if their contents cannot be identified.

Detailed information relative to the stowage, handling, and use of various types of compressed gases are contained in the *Naval Ships' Technical Manual.* Information pertinent to especially hazardous gases commonly used by ships is as follows.

ACETYLENE.— Acetylene is inherently unstable, and may explode when subjected to heat or shock or upon contact with chlorine or certain metals such as copper, silver, and mercury. Therefore, acetylene must be stowed separately from oxygen or any other materials with which it forms an explosive compound. The gas must never be allowed to escape into an enclosed area The cylinders must be protected from flames, sparks, lightning, and static electricity. Testing for suspected leaks should be done with soapy water.

Toxicity.— In moderate concentrations, acetylene may act as an intoxicant. In higher concentrations, it will cause unconsciousness and ultimately asphyxiation. Some grades of acetylene also contain many impurities. Therefore, breathing of acetylene in any concentration for any length of time must be avoided.

Upright Stowage Required.— Acetylene in cylinders is dissolved in acetone which has a tendency to flow into the valve if the cylinders a stowed horizontally. For this reason, acetylene must be stowed and used only in an upright position with the valve end up. When it is known or suspected that acetylene cylinders have been stowed on their sides, they will not be used until they have been in a vertical position for at least 2 hours.

OXYGEN AND CHLORINE.— Oxygen and chlorine are oxidizing gases that strongly support combustion. Chlorine is also poisonous. Oxygen and chlorine cylinders must be stowed on the weather deck, or in a separate watertight storeroom which has at least one compartment between it and any space that is used for the stowage of combustibles such as flammable liquids or gases, ammunition, paint, gasoline, and oil.

NONFLAMMABLE GASES.— Helium, nitrogen, carbon dioxide, and argon arem nonflammable gases. Because of their inert characteristics, they may be stowed with flammable or oxidizing gases. Since these non-flammable gases will not support expiration (a sufficient concentration in a closed space will cause asphyxiation), they must bestowed on the weather deck or in other well-ventilated spaces.

AEROSOL PRO DUCTS.— Aerosol products are liquids, solutions, or powders suspended in a gas propellant and contained in dispensers equipped with release valves. Aerosol containers are used for the dispersal of paints, enamels, lacquers, insecticides, silicones rust preventives, etc. The aerosol propellants may be low boiling halogenated hydrocarbons or other hydrocarbons such as liquified propane or isobutane. Aerosol cylinders will burst if exposed to heat sources in excess of 120 degrees F. They are prone to leakage if subjected to impact. Aerosol propellants are extremely flammable and in sufficient concentration, can be anesthetic or asphyxiating. Aerosol products should be stowed in the flammable liquids storeroom, or in cabinets away from oxidizing materials. Mechanical ventilation will be used, when necessary, to remove accumulated vapors.

Flammable or Combustible Material

Flammable liquids have a flash point of 100 degrees F or below. Combustible liquids, greases, and pastes have a flash point of 200 degrees For below. Items which are flammable and/or combustible include:

- gasoline, oils kerosene, and other petroleum products; chemicals;
- stencil paints, marking inks, and printer's ink;
- solvents, thinners, primers, compounds, varnishes and lacquers; alcohol, acetone, ether, and naphtha;
- greases and pastes.

Except for drummed petroleum products, which may be stowed in racks on the weather deck in accordance with the *Naval Ships' Technical Manual,* flammable liquids and other flammable or combustible material will be stowed in the flammable liquids storeroom.

Radioactive Material

Radioactive items listed in the MLN are identified by special material content code "R" (or "X" if radioactive and magnetic). Radioactive instruments, electron tubes, and certain other items are labeled with the conventional United States Nuclear Regulatory Commission (USNRC) radiation symbol. This symbol must NOT be removed or obliterated. The radiation levels of radioactive material depend upon the type and

concentration of isotopes in each. It also depends upon the unit and the number of units stowed together. Any area used for stowage of radioactive material (or each bin if there is no designated area) will be conspicuously posted with the standard radiation symbol and the words "CAUTION RADIOACTIVE MATERIAL." As a minimum, radioactive material will be monitored when initial or replenishment stocks of radioactive items are stowed To prevent absorption of dangerous radioactive particles through skin abrasions, rubber gloves and extreme caution will be used in handling damaged/broken radioactive instruments, electron tubes, etc. Any suspected radiation hazard will be promptly reported to the radiological safety officer and a representative of the medical department.

Toxic Substances

A toxic (poisonous) substance may cause discomfort, asphyxiation and/or death if ingested or inhaled, or if absorbed through the skin. Therefore, adequate precautions must be taken to prevent such dangers when stowing or issuing toxic material. Toxic substances will be stowed in a cool, well-ventilated area, separate from acids. It will be protected from fire hazards or impacts which may break seals or damage containers. Each case, carton, and individual container of toxic material must be labeled with a warning such as the following:

"POISON! IF TAKEN INTERNALLY, WILL CAUSE SERIOUS ILLNESS, AND POSSIBLE DEATH!"

It is particularly important to make sure that containers of poisonous liquids such as industrial alcohol are clearly identified and labeled (ie., to prevent human consumption which can be fatal).

Stowage and handling of miscellaneous nonhazardous material is covered in the NAVSUP P-485.

SHELF-LIFE MATERIAL

Shelf-life material is material that is subject to deterioration. These items are assigned a "SHELF-LIFE CODE which is listed in the ML-N and in the List of Items Requiring Special Handling (LIRSH). The code denotes the shelf-life span of material from date of manufacture to the date when it should be either disposed of, or tested in accordance with the inventory manager's instructions in order to extend the shelf life. Type I codes (alpha) apply to items for which shelf life cannot be extended. Type II codes (numeric) apply to items for which shelf life can be extended

STOREROOM MAINTENANCE

When you are in charge of a storeroom, you are also responsible for maintaining the space. Before you secure each night, sweep the storeroom and remove all trash. Clean bins, shelves, ventilation ducts, and fans periodically. If you practice good housekeeping, your spaces will always present a neat and efficient appearance.

The material condition of your space is also your responsibility. Rust is an ever-present enemy and requires constant vigilance to keep it under control. Rust spots should be chipped, wirem brushed or sanded, primed, and spot painted. Loose bolts should be tightened promptly to prevent possible damage to the storeroom or its contents. Pipes, valves, electrical system, watertight fittings, and firefighting equipment must be examined daily and any defects reported to the Supply Officer.

Daily security reports are required by the supply officer or duty supply officer. The method and time of these reports are established in each ship's routine.

Before getting underway into open seas, storerooms must be thoroughly inspected and secured to prevent stores from shifting due to the ship's motion. Bulk stores must be braced or lashed to bulkheads, stanchions, or battens, and the fronts of open bins and shelves secured to prevent stores from falling out on deck.

Unless approval is obtained from the commanding officer, personal gear must not be stowed in supply storerooms.

SECURITY PROCEDURES

The following general security rules apply to supply department spaces;

1. Materials in store are always kept under lock and key except when the bulk of such material makes stowage under lock and key impractical.
2. Supply spaces are kept locked when not attended by authorized personnel.
3. Responsibility for the security of spaces rests with the person in charge of each space.

4. Permission for entry of persons ordinarily not authorized to have access to supply spaces will be obtained from the supply officer or the delegated assistant.
5. No supply space will be secured in such a manner that access by use of ordinary damage control equipment is impeded in an emergency.
6. Keys to supply space padlocks will not be taken from the ship by the custodian.
7. A key log will be used to identify the holders of keys removed from the key locker.
8. Combinations to combination locks are not recorded in writing except as prescribed in NAVSUPP-485.
9. All key padlocks must be 1-1/2 inch, pin tumbler type, with dead bolts, either brass or bronze, The locks must be keyed individually and furnished with two master keys for each group and two grand master keys for each set.
10. All keyless padlocks will be the three-combination, manipulation-resistance type 8077A, NSN 9Z5340-00-285-6523.
11. Combinations on keyless padlocks must be changed at least every 6 months.

Groups of Spaces

For proposes of key administration department spaces are divided into four groups:

GROUP I— General stores spaces, including general storerooms, repair parts storerooms, and special lockers and spaces related to them. Each lock must have an original and a duplicate key, each different from the keys to any other space. The person in charge of the space during working hours has possession of the original key. After working hours this person must turn over the key to the duty petty officer for safekeeping in a general key locker in the supply office. The duplicate key may be kept in the supply office key locker, in a special duplicate key locker, or in the supply officer's safe. An original master key which passes (opens) all locks in group I may be retained in the custody of the officer or petty officer designated by the supply officer. The supply officer retains the duplicate master key in his possession.

GROUP 11— Foodservice spaces, including the galley, bakeshop, bread room, vegetable preparation room, subsistence issueroom, butcher shop, refrigeration spaces, and subsistence storeroom. Each lock must have an original and a duplicate key different from the keys to any other space. These keys are handled in the same manner as for group I, except that the keys to the galley, bakeshop, bread room, butcher shop, and vegetable preparation room are not turned into the key locker but are passed between watch captains as they relieve each other. There must be a master key, different from group I, which will pass all locks in group II. This master key maybe retained in the custody of the supply officer or a designated petty officer. If a duplicate master key is furnished, it is retained in the custody of the supply officer.

GROUP III— Ship's store and clothing spaces (including the bulk storerooms), retail stores, and all associated spaces. These spaces are secured with combination padlocks.

The combination padlock comes with a "setting-in" key and instructions for setting the combination. The custodian of the space must:

1. Set a combination in the lock.
2. Record the combination on a piece of paper.
3. Place the paper and the "setting-in" key in an opaque letter-size envelope.
4. Seal the envelope.
5. Sign his name over the flap of the envelope in the presence of the ship's store officer.
6. Turn the envelope over to the ship's store officer.

The custodian does not record the combination anywhere other than on the paper turned in to the ship's store officer, nor does the custodian disclose the combination to any person. The ship's store officer receives the sealed envelope, signs his name over the flap in the presence of the custodian, and retains the sealed envelope in his safe. In the absence of the custodian, emergency entry into the space is accomplished by the ship's store officer who removes the combination from the sealed envelope and enters the space in the presence of at least two witnesses. If required, damage control nippers or burners provide easy and quick entry. These spaces must not remain unattended while unlocked. After entry is made in the absence of the custodian, the space must be secured by replacing the lock and sealing the space with a lead or car seal in the presence of the two persons witnessing the entry. The seal is removed by the custodian upon his return. When entry is obtained in the absence of the custodian, he is required, upon his return, to change the

combination. Before doing so, the custodian may, if he so desires, conduct an inventory of the stores in the space.

GROUP IV— All of the ship's service activities (barbershop, tailorshop, laundry, cobbler shop, and photographic shop) when cash sales are not made through them, or no material for cash sale is stowed therein. When the latter conditions exist, these sprees are placed under group III.

Each lock in group IV must have an original key different from the keys to other spaces. It must be kept by the person in charge of the space during working hours. After duty hours, the person in charge of the space must turn the key over to the duty petty officer for safekeeping in the key locker in the supply office. A duplicate key for each space is safeguarded in the same manner as for group I. The supply officer or the designated assistant retains in his custody a master key (original) to all locks in group IV. The supply officer retains the duplicate master key in his custody.

Grand Master Key

The supply officer is required to maintain in his custody a grand master key, which will open all locks in groups I, II, and IV. It will NOT open locks in group III. If authorized by the supply Officer, duty supply officers or duty petty officers may pass the duplicate key between them when the number of supply officers aboard is such that the senior petty officers are required to set as department duty officers.

Figure 6-4 illustrates typical custody with regard to keys. Study and become familiar with it.

Sets of locks containing locks for group I, II, and IV supply spaces, are available in various sizes to meet the requirements of different ships. When a single series padlock set is inadequate to meet the needs of large ships, more than one set may be used. For example, one set for group I and a second set for groups II and IV.

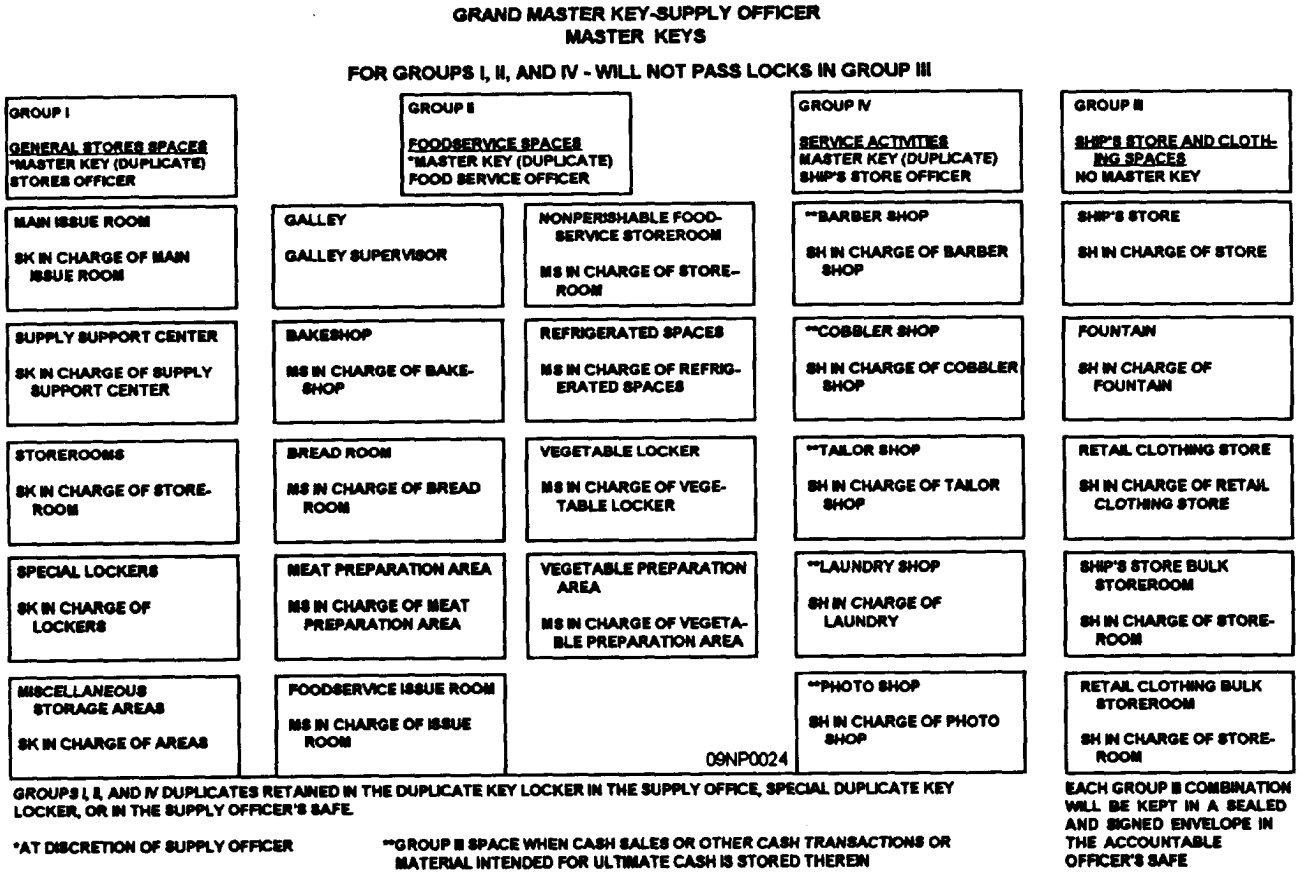

Figure 6-4.-Supply space groups and custody chart.